Customer No.: 31561
Application No.: 10/709,717
Docket No.: 13004-US-PA

To the Claims :

1. (original) A fluid ejection device suitable for an ink-jet printer, comprising:

a substrate, having an orifice;

a beam, disposed over the substrate, the beam having a fixed portion and a cantilever portion, wherein the cantilever portion is disposed over the orifice; and

an activation pad, disposed between the cantilever portion of the beam and the substrate.

2. (original) The fluid ejection device of claim 1, further comprising a stopper, disposed on the cantilever portion of the beam, wherein the stopper is aligned to the orifice of the substrate.

3. (original) The fluid ejection device of claim 2, wherein a dimension of the stopper is larger than that of the orifice.

4. (original) The fluid ejection device of claim 1, wherein the fixed portion of the beam is a collar structure disposed on the substrate for supporting the cantilever portion.

5. (original) The fluid ejection device of claim 1, further comprising an encapsulation structure covering the substrate for encapsulating the beam and the activation pad.

6-17. (cancelled)

18. (original) A method of operating a fluid ejection device, comprising:

providing the fluid ejection device of claim 1;

providing a fluid;

filling the fluid into the fluid ejection device;

wherein when a voltage is applied to the activation pad, the cantilever portion of the beam is pulled down from an initial position toward the orifice of the substrate for ejecting the fluid out of the orifice; and

wherein when the voltage applied to the activation pad is removed, the cantilever portion of the beam gradually moves away from the orifice.

19. (original) The method of operating a fluid ejection device of claim 18, wherein when the voltage applied to the activation pad is removed, the cantilever portion of the beam gradually moves away from the orifice.

20. (original) The method of operating a fluid ejection device of claim 18, wherein when the voltage is applied to the activation pad, the cantilever portion of the beam is pulled down for, contacting the orifice of the substrate and thereby ejecting the fluid from the orifice.